

RAW SEQUENCE LISTING

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Application Serial Number: 10/080,983 A
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RAW SEQUENCE LISTING

DATE: 03/08/2005

PATENT APPLICATION: US/10/080,943A

TIME: 11:08:52

Input Set : A:\iu-99.ST25.txt

Output Set: N:\CRF4\03082005\J080943A.raw

3 <110> APPLICANT: Indiana University Research and Technology Center
 4 Field, Loren J.
 5 Tsai, Shih-Chong
 7 <120> TITLE OF INVENTION: P193 PROTEINS AND NUCLEIC ACIDS, AND USES THEREOF
 9 <130> FILE REFERENCE: IU-99-PCT-US
 11 <140> CURRENT APPLICATION NUMBER: 10/080,943A
 12 <141> CURRENT FILING DATE: 2002-02-22
 14 <150> PRIOR APPLICATION NUMBER: PCT/US00/23161
 15 <151> PRIOR FILING DATE: 2000-08-23
 17 <150> PRIOR APPLICATION NUMBER: US 60/150.266
 18 <151> PRIOR FILING DATE: 1999-08-23
 20 <160> NUMBER OF SEQ ID NOS: 13
 22 <170> SOFTWARE: PatentIn version 3.3
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 5217
 26 <212> TYPE: DNA
 27 <213> ORGANISM: mus musculus
 30 <220> FEATURE:
 31 <221> NAME/KEY: CDS
 32 <222> LOCATION: (62)..(5131)
 34 <400> SEQUENCE: 1

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37	g atg gta ggg gag cta cga tac agg gaa ttc agg gtg ccc ctg ggg cct	109
38	Met Val Gly Leu Arg Tyr Arg Glu Phe Arg Val Pro Leu Gly Pro	
39	1 5 10 15	
41	ggc ttg cac gcg tat ccg gat gaa ttg atc cgc caa cgg gtt ggc cat	157
42	Gly Leu His Ala Tyr Pro Asp Glu Leu Ile Arg Gln Arg Val Gly His	
43	20 25 30	
45	aat ggg cac ccc gag tat cag atc cgc tgg ctc atc ctc agg cgc ggg	205
46	Asn Gly His Pro Glu Tyr Gln Ile Arg Trp Leu Ile Leu Arg Arg Gly	
47	35 40 45	
49	gat gat ggg gac cgg gac tct aca gtg gac tgc aag gct gag cat atc	253
50	Asp Asp Gly Asp Arg Asp Ser Thr Val Asp Cys Lys Ala Glu His Ile	
51	50 55 60	
53	ctg tta tgg atg tct gac gat gag atc tat gcc aac tgc cac aag atg	301
54	Leu Leu Trp Met Ser Asp Asp Glu Ile Tyr Ala Asn Cys His Lys Met	
55	65 70 75 80	
57	ctg ggc gag aat ggc caa gtc atc gca cct tcc cgg gag tcc act gag	349
58	Leu Gly Glu Asn Gly Gln Val Ile Ala Pro Ser Arg Glu Ser Thr Glu	
59	85 90 95	
61	gca ggg gcc ctc gac aag tct gtg ctg ggg gag atg gaa aca gat gtg	397
62	Ala Gly Ala Leu Asp Lys Ser Val Leu Gly Glu Met Glu Thr Asp Val	
63	100 105 110	

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65 aag tcc ttg att cag agg gcc ctt cgg cag ctg gag gag tgc gtg ggc	445
66 Lys Ser Leu Ile Gln Arg Ala Leu Arg Gln Leu Glu Glu Cys Val Gly	
67 115 120 125	
69 acc gtg cct cct gcc cct ctc ctt cac acg gtc cat gta ctc agt gcc	493
70 Thr Val Pro Pro Ala Pro Leu Leu His Thr Val His Val Leu Ser Ala	
71 130 135 140	
73 tat gcc agc atc gag ccc ctc act ggc atc ttc aaa gac cgc agg gtt	541
74 Tyr Ala Ser Ile Glu Pro Leu Thr Gly Ile Phe Lys Asp Arg Arg Val	
75 145 150 155 160	
77 gtg aac ttg ctc atg cac atg ttg agc agt cct gat tat cag atc cgc	589
78 Val Asn Leu Leu Met His Met Leu Ser Ser Pro Asp Tyr Gln Ile Arg	
79 165 170 175	
81 tgg agc gca ggc cggtt atg atc caa gct ctg tcc tcc cac gat gct ggg	637
82 Trp Ser Ala Gly Arg Met Ile Gln Ala Leu Ser Ser His Asp Ala Gly	
83 180 185 190	
85 acc cgg acc cag atc ctt ctg tca ttg agc caa caa gag gcc att gaa	685
86 Thr Arg Thr Gln Ile Leu Leu Ser Leu Ser Gln Gln Glu Ala Ile Glu	
87 195 200 205	
89 aag cac ctg gat ttt gat agc cgc tgc gct ctg ctt gca ctg ttc gcc	733
90 Lys His Leu Asp Phe Asp Ser Arg Cys Ala Leu Leu Ala Leu Phe Ala	
91 210 215 220	
93 cag gct act ctc acg gaa cac ccg atg tct ttc gag ggc gtt cag ctg	781
94 Gln Ala Thr Leu Thr Glu His Pro Met Ser Phe Glu Gly Val Gln Leu	
95 225 230 235 240	
97 cca cag gtc cca gga cgg ctg ctc ttc tcc ctg gta aaa cgc tac ctg	829
98 Pro Gln Val Pro Gly Arg Leu Leu Phe Ser Leu Val Lys Arg Tyr Leu	
99 245 250 255	
101 cac gtc acc ttc ctc ctg gat cgg ctg aac ggc gat gca ggg gat caa	877
102 His Val Thr Phe Leu Leu Asp Arg Leu Asn Gly Asp Ala Gly Asp Gln	
103 260 265 270	
105 gga gcc cag aac aac ttt agt cct gag gag ttg aat gta ggg agg ggc	925
106 Gly Ala Gln Asn Asn Phe Ser Pro Glu Glu Leu Asn Val Gly Arg Gly	
107 275 280 285	
109 cgg ctg gaa ctg gaa ttc agt atg gcc atg ggc act ctg atc tct gag	973
110 Arg Leu Glu Leu Glu Phe Ser Met Ala Met Gly Thr Leu Ile Ser Glu	
111 290 295 300	
113 ctg gtg cag gcc atg cgc tgg gac ggg gcc tca agc aga cca gag agt	1021
114 Leu Val Gln Ala Met Arg Trp Asp Gly Ala Ser Ser Arg Pro Glu Ser	
115 305 310 315 320	
117 tct tcc tcc tcc acc ttc cag cct cgg cca gca cag ttc cgc ccc tac	1069
118 Ser Ser Ser Thr Phe Gln Pro Arg Pro Ala Gln Phe Arg Pro Tyr	
119 325 330 335	
121 acc cag cgt ttc agg agg tcg agg cgg ttt cgc ccc cgt gcc tcg ttt	1117
122 Thr Gln Arg Phe Arg Arg Ser Arg Arg Phe Arg Pro Arg Ala Ser Phe	
123 340 345 350	
125 gcc agt ttt aat acc tat gcc ttg tat gtg cgg gac acg ctg cgg ccc	1165
126 Ala Ser Phe Asn Thr Tyr Ala Leu Tyr Val Arg Asp Thr Leu Arg Pro	
127 355 360 365	
129 ggg atg cgg gta cgg atg ctg gag aat tac gag gag atc gct gct ggg	1213

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131	370					375					380						
133	gat	gag	ggc	cag	ttc	cga	cag	agc	aat	gat	ggc	gtt	ccc	cca	gcg	cag	1261
134	Asp	Glu	Gly	Gln	Phe	Arg	Gln	Ser	Asn	Asp	Gly	Val	Pro	Pro	Ala	Gln	
135	385					390					395					400	
137	gtg	ttg	tgg	gat	tca	aca	ggc	cat	acc	tac	tgg	gtg	cac	tgg	cac	atg	1309
138	Val	Leu	Trp	Asp	Ser	Thr	Gly	His	Thr	Tyr	Trp	Val	His	Trp	His	Met	
139						405				410					415		
141	ctg	gag	atc	ttg	ggc	ttt	gag	gaa	gac	atc	gag	gat	gtg	att	gat	att	1357
142	Leu	Glu	Ile	Leu	Gly	Phe	Glu	Glu	Asp	Ile	Glu	Asp	Val	Ile	Asp	Ile	
143						420				425					430		
145	gaa	gag	tta	cag	gag	cta	ggg	gcc	aat	gga	gca	ctg	agc	atc	gtc	ccg	1405
146	Glu	Glu	Leu	Gln	Glu	Leu	Gly	Ala	Asn	Gly	Ala	Leu	Ser	Ile	Val	Pro	
147						435			440			445					
149	ccg	tcc	cag	cgc	tgg	aag	ccc	ata	act	cag	ctc	ttt	gcc	gag	cct	tac	1453
150	Pro	Ser	Gln	Arg	Trp	Lys	Pro	Ile	Thr	Gln	Leu	Phe	Ala	Glu	Pro	Tyr	
151						450			455			460					
153	gtg	gta	ccc	gag	gag	gaa	gac	agg	gaa	gag	agc	gag	aac	ttg	acc	cag	1501
154	Val	Val	Pro	Glu	Glu	Asp	Arg	Glu	Glu	Ser	Glu	Asn	Leu	Thr	Gln		
155	465					470				475					480		
157	gct	gag	tgg	tgg	gag	ctc	ctc	tcc	atc	cg	cgg	cag	tgg	agt	gag	gca	1549
158	Ala	Glu	Trp	Trp	Glu	Leu	Leu	Phe	Phe	Ile	Arg	Gln	Leu	Ser	Glu	Ala	
159						485			490			495					
161	gag	cgc	ctt	cac	atc	gtg	gat	ctc	ctg	caa	gac	cac	ctg	gaa	gag	gag	1597
162	Glu	Arg	Leu	His	Ile	Val	Asp	Leu	Leu	Gln	Asp	His	Leu	Glu	Glu		
163						500			505			510					
165	cg	cg	gt	g	ac	ta	ct	gt	ct	g	ct	gg	cc	gt	cc	gt	1645
166	Arg	Val	Leu	Asp	Tyr	Asp	Met	Leu	Pro	Gl	Leu	Thr	Val	Pro	Val	Asp	
167						515			520			525					
169	ttg	ggc	cag	gat	ctg	ctg	ttg	tct	ctg	cct	cag	caa	ctt	gag	gac	agt	1693
170	Leu	Ala	Gln	Asp	Leu	Leu	Leu	Ser	Leu	Pro	Gln	Gln	Leu	Glu	Asp	Ser	
171						530			535			540					
173	gct	ctg	agg	gac	ctg	ttc	agc	tgc	agt	gtc	tac	agg	aag	tat	ggg	ccc	1741
174	Ala	Leu	Arg	Asp	Leu	Phe	Ser	Cys	Ser	Val	Tyr	Arg	Lys	Tyr	Gly	Pro	
175	545					550				555			560				
177	gaa	gtc	ctg	gt	gg	cat	cta	agc	ta	ttt	gtg	cca	gg	gtc	cc	cag	1789
178	Glu	Val	Leu	Val	Gly	His	Leu	Ser	Tyr	Pro	Phe	Val	Pro	Gly	Ala	Gln	
179						565			570			575					
181	cca	aat	tta	ttc	gga	gcc	aat	gaa	gag	tct	gaa	gcc	aaa	gat	ccc	cca	1837
182	Pro	Asn	Leu	Phe	Gly	Ala	Asn	Glu	Glu	Ser	Glu	Ala	Lys	Asp	Pro	Pro	
183						580			585			590					
185	ctt	cag	agt	ggc	agc	cct	ggc	ctg	cag	cgc	ctg	gtg	gag	agc	ttg	ggc	1885
186	Leu	Gln	Ser	Ala	Ser	Pro	Ala	Leu	Gln	Arg	Leu	Val	Glu	Ser	Leu	Gly	
187						595			600			605					
189	ccc	gaa	ggg	gag	gtc	ctt	gt	g	aa	ca	ggc	ctc	ggc	tcc	gag		1933
190	Pro	Glu	Gly	Gl	U	Val	Leu	Val	Glu	Leu	Glu	Gln	Ala	Leu	Gly	Ser	Glu
191						610			615			620					
193	gct	ccc	cag	gaa	act	gag	gtc	aag	tcc	tgc	ttg	ttg	cag	ctc	cag	gag	1981
194	Ala	Pro	Gln	Glu	Thr	Glu	Val	Lys	Ser	Cys	Leu	Leu	Gln	Gln	Glu		

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198	Gln	Pro	Gln	Pro	Phe	Leu	Ala	Leu	Met	Arg	Ser	Leu	Asp	Thr	Ser	Ala		
199																655		
201	agc	aac	aag	acc	ctg	cac	ctc	act	gtg	ctc	aga	atc	tta	atg	cag	ctg	2077	
202	Ser	Asn	Lys	Thr	Leu	His	Leu	Thr	Val	Leu	Arg	Ile	Leu	Met	Gln	Leu		
203																670		
205	gtg	aac	ttc	cca	gag	g	cg	ctg	ttg	cta	ccc	tgg	cac	gag	gcc	atg	gat	2125
206	Val	Asn	Phe	Pro	Glu	Ala	Leu	Leu	Leu	Pro	Trp	His	Glu	Ala	Met	Asp		
207																685		
209	gcc	tgc	gtg	acc	tgc	ctt	cg	gg	tcc	ccc	aat	act	gac	cga	gag	gtg	ctc	2173
210	Ala	Cys	Val	Thr	Cys	Leu	Arg	Ser	Pro	Asn	Thr	Asp	Arg	Glu	Val	Leu		
211																700		
213	cag	gaa	cta	atc	ttt	ttc	ctg	cac	cg	ctg	acc	acc	aca	agc	cgg	gac	2221	
214	Gln	Glu	Leu	Ile	Phe	Phe	Leu	His	Arg	Leu	Thr	Thr	Thr	Ser	Arg	Asp		
215																720		
217	tat	g	cg	gt	g	at	ta	ct	a	c	g	at	g	cc	at	tcc	aaa	2269
218	Tyr	Ala	Val	Ile	Leu	Asn	Gln	His	Gly	Ala	Arg	Asp	Ala	Ile	Ser	Lys		
219																735		
221	gtc	ctg	gaa	aag	cac	cg	gg	aaa	ctg	gag	ttg	gct	cag	gag	ctg	cg	2317	
222	Val	Leu	Glu	Lys	His	Arg	Gly	Lys	Leu	Glu	Leu	Ala	Gln	Glu	Leu	Arg		
223																750		
225	gat	atg	gt	tg	tcc	aag	tgt	gag	aag	cat	g	cc	cac	ctc	tac	cg	aaa	2365
226	Asp	Met	Val	Ser	Lys	Cys	Glu	Lys	His	Ala	His	Leu	Tyr	Arg	Lys	Leu		
227																765		
229	acc	acc	aac	atc	ctg	gg	gt	tgc	atc	cag	atg	g	tc	gt	gg	cag	att	2413
230	Thr	Thr	Asn	Ile	Leu	Gly	Gly	Cys	Ile	Gln	Met	Val	Leu	Gly	Gln	Ile		
231																780		
233	gaa	gac	cac	ag	cg	aa	cc	ac	cg	ccc	atc	ca	atc	cc	ttc	ttt	gat	2461
234	Glu	Asp	His	Arg	Arg	Thr	His	Arg	Pro	Ile	Gln	Ile	Pro	Phe	Phe	Asp		
235																800		
237	gt	tg	tt	ctc	ag	ta	tg	tg	ca	gg	tc	atg	gag	gaa	atg	aag	aaa	2509
238	Val	Phe	Leu	Arg	Tyr	Leu	Cys	Gln	Gly	Ser	Ser	Glu	Glu	Met	Lys	Lys		
239																815		
241	aac	agg	tac	tgg	gag	aag	gt	gag	gt	tg	tc	tc	aa	cc	cag	cg	gg	2557
242	Asn	Arg	Tyr	Trp	Glu	Lys	Val	Glu	Val	Ser	Ser	Asn	Pro	Gln	Arg	Ala		
243																830		
245	agc	agg	ctg	ac	gac	cg	cc	aag	acc	atc	tgg	gag	tc	atg	gg	cc	2605	
246	Ser	Arg	Leu	Thr	Asp	Arg	Asn	Pro	Lys	Thr	Tyr	Trp	Glu	Ser	Ser	Gly		
247																845		
249	agg	gg	cc	tcc	ac	ttc	atc	acc	tta	ca	atg	cg	cc	gg	gt	tc	atc	2653
250	Arg	Ala	Gly	Ser	His	Phe	Ile	Thr	Leu	His	Met	Arg	Pro	Gly	Val	Ile		
251																860		
253	atc	agg	cag	ctg	ac	ct	ctg	gt	g	gc	gag	g	ac	tac	atg		2701	
254	Ile	Arg	Gln	Leu	Thr	Leu	Leu	Val	Ala	Gly	Glu	Asp	Ser	Ser	Tyr	Met		
255																880		
257	cca	gc	tgg	gt	gt	gt	gt	gg	gg	gg	aac	agc	atc	aag	tcc	gtt	aat	2749
258	Pro	Ala	Trp	Val	Val	Val	Cys	Gly	Gly	Asn	Ser	Ile	Lys	Ser	Val	Asn		
259																895		

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261	aaa gaa ctc aac acg gta aac gtg atg ccc tct gcc agc cg ^g gtg acc	2797
262	Lys Glu Leu Asn Thr Val Asn Val Met Pro Ser Ala Ser Arg Val Thr	
263	900 905 910	
265	ctc ctg gag aac ctg acc cgc ttc tgg ccc atc atc caa atc aga ata	2845
266	Leu Leu Glu Asn Leu Thr Arg Phe Trp Pro Ile Ile Gln Ile Arg Ile	
267	915 920 925	
269	aag cgc tgc cag cag ggt ggc att aac acg cgc atc cgg ggc cta gag	2893
270	Lys Arg Cys Gln Gln Gly Gly Ile Asn Thr Arg Ile Arg Gly Leu Glu	
271	930 935 940	
273	gtg ctg ggc ccc aag ccc acc ttc tgg cca gtg ttc cga gag caa ctg	2941
274	Val Leu Gly Pro Lys Pro Thr Phe Trp Pro Val Phe Arg Glu Gln Leu	
275	945 950 955 960	
277	tgc cgg cac acg cgc ctc ttc tac atg gtt cgg gcc cag gca tgg agt	2989
278	Cys Arg His Thr Arg Leu Phe Tyr Met Val Arg Ala Gln Ala Trp Ser	
279	965 970 975	
281	cag gac ata gca gag gac cgc cgg agc ctt ctg cac ctg agt tct agg	3037
282	Gln Asp Ile Ala Glu Asp Arg Arg Ser Leu Leu His Leu Ser Ser Arg	
283	980 985 990	
285	cta aat ggg gct ctg cgc cat gaa cag aat ttt gca gag cgc ttc ctt	3085
286	Leu Asn Gly Ala Leu Arg His Glu Gln Asn Phe Ala Glu Arg Phe Leu	
287	995 1000 1005	
289	cct gat atg gag gcc gca aac gca ctg agc aag acc tgc tgg gag	3130
290	Pro Asp Met Glu Ala Ala Gln Ala Leu Ser Lys Thr Cys Trp Glu	
291	1010 1015 1020	
293	gcf ctg gtc agc ccc ctg gtg cag aac att aca tct ccc gat gag	3175
294	Ala Leu Val Ser Pro Leu Val Gln Asn Ile Thr Ser Pro Asp Glu	
295	1025 1030 1035	
297	gac agc acc agc tcc ttg ggc tgg ctg ctg gat cag tac ttg gga	3220
298	Asp Ser Thr Ser Ser Leu Gly Trp Leu Leu Asp Gln Tyr Leu Gly	
299	1040 1045 1050	
301	tgc agg gag gct gcc tac aat ccc cag agc agg gct gct gct ttc	3265
302	Cys Arg Glu Ala Ala Tyr Asn Pro Gln Ser Arg Ala Ala Ala Phe	
303	1055 1060 1065	
305	tcc tcc cgg gtt cgc cgc ctt acc cac ctc ctg gtc cat gtg gag	3310
306	Ser Ser Arg Val Arg Arg Leu Thr His Leu Leu Val His Val Glu	
307	1070 1075 1080	
309	ccc cgt gag gca gca cct ccg gtg gtg gcc atc cct cga tcc aag	3355
310	Pro Arg Glu Ala Ala Pro Pro Val Val Ala Ile Pro Arg Ser Lys	
311	1085 1090 1095	
313	ggc agg aac aga atc cat gac tgg agc tac ttg atc acc cgg ggc	3400
314	Gly Arg Asn Arg Ile His Asp Trp Ser Tyr Leu Ile Thr Arg Gly	
315	1100 1105 1110	
317	ctt cca agt agc atc atg aag aac ctg acc cgc tgt tgg cgg tct	3445
318	Leu Pro Ser Ser Ile Met Lys Asn Leu Thr Arg Cys Trp Arg Ser	
319	1115 1120 1125	
321	gtg gtg gag gag cag atg aac aag ttt ctc agt gcg tcc tgg aaa	3490
322	Val Val Glu Glu Gln Met Asn Lys Phe Leu Ser Ala Ser Trp Lys	
323	1130 1135 1140	
325	gac gat gat ttc gta ccc cgc tat tgc gag cgc tat tac gtc ctg	3535

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